

REVISED DIRECT TESTIMONY AND EXHIBITS OF
BRANDON S. BICKLEY
ON BEHALF OF
THE SOUTH CAROLINA OFFICE OF REGULATORY STAFF
DOCKET NO. 2022-1-E

1 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND OCCUPATION.**

2 A. My name is Brandon S. Bickley. My business address is 1401 Main Street, Suite
3 900, Columbia, South Carolina 29201. I am employed by the State of South Carolina as a
4 Regulatory Manager for the Office of Regulatory Staff (“ORS”).

5 **Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.**

6 A. I received my Bachelor of Science Degree with a major in Mechanical Engineering
7 from the University of South Carolina in 2010. From 2010 to 2013, I was employed as a
8 Nuclear Engineer, Reactor Fuel Safety Officer, and Shift Refueling Engineer at Norfolk
9 Naval Shipyard. In that capacity, I performed engineering and operational duties in support
10 of the United States Navy related to reactor servicing, reactor fuel, special nuclear material,
11 special nuclear projects, security, and safety. From 2013 to 2017, I was employed as an
12 Inspections, Tests, Analyses, and Acceptance Criteria (“ITAAC”) Engineer with South
13 Carolina Electric & Gas Company (“SCE&G”). In that capacity, I obtained the level of a
14 Senior Engineer and performed ITAAC reviews and construction oversight for SCE&G.
15 From 2017 to 2019, I was employed by Savannah River Remediation as a Senior Engineer.
16 In that capacity, I performed systems engineering duties in support of the Defense Waste
17 Processing Facility for Savannah River Remediation. I began my employment with ORS

as a Regulatory Analyst in July of 2019. In January of 2022, I was promoted to my current position of Regulatory Manager in the Energy Operations Division.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA (“COMMISSION”)?

A. Yes. I have previously testified before the Commission on several occasions including annual fuel proceedings, general rate cases, and a proceeding related to the Utility Facility Siting and Environmental Protection Act.

Q. WHAT IS THE MISSION OF THE OFFICE OF REGULATORY STAFF?

A. ORS represents the public interest as defined by the South Carolina General Assembly in S. C. Code Ann. § 58-4-10 as:

[T]he concerns of the using and consuming public with respect to public utility services, regardless of the class of customer, and preservation of continued investment in and maintenance of utility facilities so as to provide reliable and high-quality utility services.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY AND HOW DOES YOUR DIRECT TESTIMONY REPRESENT THE PUBLIC INTEREST?

A. The purpose of my direct testimony is to set forth ORS’s recommendations resulting from the examination and review of Duke Energy Progress, LLC’s (“DEP” or the “Company”) fuel expenses used in the generation of electricity to meet the Company’s South Carolina retail customer requirements during the review period. The review period includes the actual data for March 2021 through February 2022 (“Actual Period”), estimated data for March 2022 through June 2022 (“Estimated Period”), and forecasted data for July 2022 through June 2023 (“Forecasted Period”). My review focused on evaluating the Company’s fuel procurement and forecasting policies, procedures, and

activities to ensure the Company made every reasonable effort to minimize fuel costs in order to provide reliable and high-quality service to its customers.

Q. WAS THE REVIEW PERFORMED BY YOU OR UNDER YOUR SUPERVISION?

A. Yes. The review to which I testify was performed by me or under my supervision.

Q. WHAT DID ORS'S REVIEW OF THE COMPANY'S FUEL EXPENSES INVOLVE?

A. ORS examined various fuel-related documents as part of its review. These documents address the Company's fuel, environmental, and purchased power expenses for the Actual, Estimated, and Forecasted Periods. In preparation for this proceeding, ORS analyzed the Company's monthly fuel reports and examined the Company's contracts for nuclear fuel, coal, natural gas, fuel oil, transportation, environmental reagents, and purchased power. ORS also evaluated the Company's policies and procedures for fuel procurement. All information was reviewed with reference to the Company's existing Adjustment for Fuel, Variable Environmental, Avoided Capacity, S.C. Code Ann. §58-27-865 (the "Fuel Clause Statute"), and the Company's approved Distributed Energy Resource Program ("DERP"), S.C. Code Ann. § 58-39-140.

Q. WHAT ADDITIONAL STEPS DID ORS TAKE IN REVIEW OF THE COMPANY'S PROPOSAL?

A. ORS met virtually with Company personnel from various departments on numerous occasions to discuss and review fossil and nuclear fuel procurement, fuel transportation, environmental compliance costs and procedures, emission allowances, forecasting, and general Company policies and procedures pertaining to fuel procurement. In addition, ORS

monitors the nuclear, coal, natural gas, transportation, and renewable industries through industry and governmental publications.

Q. DID ORS REVIEW THE COMPANY'S ENVIRONMENTAL COMPLIANCE RELATED COSTS?

A. Yes. ORS reviewed the Company's environmental compliance-related costs including allowances for nitrogen oxide ("NO_x") and sulfur dioxide ("SO₂") emissions, reagents (i.e., limestone, ammonia, urea, etc.), and chemicals used in the reduction of these emissions. The use of these chemicals and reagents reduces the Company's NO_x and SO₂ emissions, and the costs associated with the use of these substances are included in the Company's Adjustment for Fuel, Variable Environmental & Avoided Capacity, and DERP costs tariff as provided by the Fuel Clause Statute.

Q. DID ORS REVIEW THE ACCURACY OF THE COMPANY'S FORECAST?

A. Yes. As shown in Revised Exhibit BSB-1, the Company's actual megawatt-hour ("MWh") sales were 11.15% lower than expected during the Actual Period. Revised Exhibit BSB-2 shows, on average, the actual fuel costs for the Actual Period were 34.05% higher than the projected monthly fuel costs. Revised Exhibit BSB-3 shows the actual base fuel expenses for the Actual Period were 15.84% higher than the Company's projections for the Actual Period.

Q. PLEASE DISCUSS ORS'S REVIEW OF THE COMPANY'S PROJECTED SALES AND COSTS FOR THE ESTIMATED AND FORECASTED PERIODS.

A. ORS reviewed the Company's projected sales and performed a comparative analysis to the projections from its last fuel proceeding in Docket No. 2021-1-E and sales from the Actual Period. ORS held discussions with the Company about forecasting

1 methodology and impacts associated with weather, holidays, COVID-19, current world
2 events, and other factors. ORS found the Company's sales projections to be reasonable and
3 in line with historical sales data including the Company's projections at the time of the
4 Company's Direct Testimony being filed.

5 ORS reviewed the Company's forecasted costs for nuclear fuel, coal, natural gas,
6 fuel oil, transportation, environmental reagents, and purchased power for the Estimated and
7 Forecasted Periods used to develop the Company's Direct Testimony. ORS compared the
8 monthly projected costs to historical projections from Docket No. 2021-1-E, actual data
9 from the Actual Period, and commodity prices from numerous industry publications. Based
10 on this review of the updated forecast, ORS found the Company's forecasted costs to be
11 reasonable.

12 **Q. PLEASE EXPLAIN THE PRIMARY DRIVERS OF THE COMPANY'S REQUEST**
13 **FOR A RATE CHANGE IN THIS PROCEEDING.**

14 A. Revised Exhibit BSB-4 shows the cumulative ending period balances of base fuel,
15 environmental, capacity, and DERP avoided costs beginning in February 2012. As of
16 February 2022, the Company had a cumulative base fuel under-recovery balance of
17 \$36,766,807, a cumulative environmental under-recovery balance of \$415,184, a
18 cumulative capacity related under-recovery balance of \$6,053,780, and a cumulative DERP
19 avoided costs over-recovery balance of \$59,164. This is reflected in ORS Witness
20 Briseno's Exhibit ADB-4. As shown on ORS Witness Briseno's Exhibit ADB-4, ORS
21 projects the Company to have a cumulative base fuel under-recovery balance of
22 \$40,666,187, a cumulative environmental under-recovery balance of \$437,897, a
23 cumulative capacity related under-recovery balance of \$5,044,695, and a cumulative DERP

1 avoided costs over-recovery balance of \$53,867 by June 2022. The Company's request for
2 an increase is driven by the projected fuel cost under-recovery as of June 2022 and
3 increasing commodity prices in the Forecasted Period as discussed in detail in the
4 Company's Direct Testimony.

5 **Q. WHAT CHANGES DOES THE COMPANY REQUEST TO ITS CURRENTLY**
6 **APPROVED FACTORS?**

7 A. The Company requests the Commission approve an increase to its currently
8 approved Base Fuel Component for the Forecasted Period. Additionally, the Company
9 requests to update its Environmental Component, Capacity Related Component, and DERP
10 Avoided Cost Component to reflect the Company's forecasted expenses and allocation of
11 these expenses to each class of customer based on its contribution to the Company's peak
12 demands.

13 **Q. DOES ORS RECOMMEND ANY ADJUSTMENTS TO THE FUEL FACTORS**
14 **PROPOSED BY THE COMPANY?**

15 A. No. ORS does not recommend any adjustments to the Fuel Factors based on the
16 Company's historical and forecasted fuel expenses and customer sales.

17 **Q. ARE THERE ANY ADDITIONAL FACTORS IN THIS DOCKET THAT WILL**
18 **IMPACT CUSTOMERS' BILLS?**

19 A. Yes. The Company included proposed rates related to its DERP incremental
20 expenses. ORS Witness Pool addresses the Company's DERP incremental expenses to be
21 recovered as a fixed charge ("DERP Charge") on customer bills.

Q. IF APPROVED BY THE COMMISSION, WHAT WOULD THE OVERALL IMPACTS BE TO CUSTOMERS' BILLS?

A. Revised Exhibit BSB-5 is a summary of the proposed fuel factor components for each customer class. If approved by the Commission, the rates proposed would increase the typical monthly bill for a Residential Customer on Rate RES using 1,000 kilowatt-hours ("kWh") from \$122.86 to approximately \$132.99, a net increase of \$10.13 or 8.25%, excluding Gross Receipts Tax or Regulatory Fees. For General Service Non-demand, General Service Demand, and Lighting customers, the proposed rates would increase the average monthly bills by approximately 6.8%, 11.9%, and 3.6%, respectively.

Q. DOES ORS HAVE ANY ADDITIONAL RECOMMENDATIONS REGARDING THE COMPANY'S ANNUAL FUEL FILINGS?

A. Yes. ORS recommends that DEP provide a forecast to all interested parties of the expected fuel factor to be set at its next annual fuel proceeding based upon its historical (over)/under recovery to date and forecasts of prices for uranium, natural gas, coal, oil, and other fuel required for the generation of electricity. Additionally, the forecast would provide the expected DERP Charge to be set at the Company's next annual fuel proceeding based upon DEP's historical (over)/under-recovery to date and DEP's forecast of DERP incremental and avoided costs. ORS recommends these forecasts be provided during each of the three (3) quarters in which there is no annual fuel proceeding but not in the quarter where DEP makes its annual fuel filing. These forecasts would provide valuable information for interested parties prior to the Company's next fuel proceeding.

1 **Q. WILL YOU UPDATE YOUR DIRECT TESTIMONY BASED ON INFORMATION**
2 **THAT BECOMES AVAILABLE?**

3 A. Yes. ORS fully reserves the right to revise its recommendations via supplemental
4 testimony should new information not previously provided by the Company, or other
5 sources, become available.

6 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

7 A. Yes, it does.

Office of Regulatory Staff
Comparison of South Carolina Estimated to Actual Energy Sales
Duke Energy Progress, LLC
Docket No. 2022-1-E

REVISED EXHIBIT BSB-1

		2021										2022		Actual Period Total
		Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	
1	Actual Sales (MWh)	498,431	464,425	428,430	500,381	557,057	624,487	534,886	472,058	271,511	414,134	474,010	668,051	5,907,861
2	Estimated Sales (MWh)	547,027	497,685	478,060	532,742	633,242	645,471	588,807	526,009	480,202	540,513	584,287	594,945	6,648,989
3	Difference (1-2)	-48,595	-33,260	-49,630	-32,361	-76,185	-20,984	-53,922	-53,952	-208,691	-126,378	-110,277	73,107	-741,127
4	Percent Difference (3/2)	-8.88%	-6.68%	-10.38%	-6.07%	-12.03%	-3.25%	-9.16%	-10.26%	-43.46%	-23.38%	-18.87%	12.29%	-11.15%

Office of Regulatory Staff
Comparison of South Carolina Estimated to Actual Fuel Cost
Duke Energy Progress, LLC
Docket No. 2022-1-E

REVISED EXHIBIT BSB-

		2021										2022		Actual Period Average
		Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	
1	Actual Experience (¢/kWh)	1.707	1.738	2.462	2.184	2.205	2.374	1.651	1.967	3.338	2.733	3.789	2.097	2.354
2	Original Projection (¢/kWh)	1.859	1.625	1.861	1.851	1.854	1.796	1.653	1.460	1.620	1.757	1.937	1.802	1.756
3	Amount in Base (¢/kWh)	1.887	1.887	1.887	1.887	1.874	1.874	1.874	1.874	1.874	1.874	1.874	1.874	1.878
4	Variance from Actual ((1-2)/2)	-8.18%	6.96%	32.29%	17.97%	18.95%	32.15%	-0.11%	34.73%	106.07%	55.51%	95.58%	16.35%	34.05%

Office of Regulatory Staff
Comparison of Estimated to Actual Base Fuel Costs
Duke Energy Progress, LLC
Docket No. 2022-1-E

REVISED EXHIBIT BSB

		2021										2022		Actual Period Total
		Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	
1	Actual Experience (Total \$)	\$8,510,171	\$8,070,741	\$10,549,373	\$10,925,984	\$12,280,386	\$14,825,672	\$8,829,029	\$9,284,709	\$9,064,355	\$11,319,938	\$17,960,389	\$14,010,284	\$135,631,031
2	Original Projection (Total \$)	\$10,169,321	\$8,087,051	\$8,897,035	\$9,862,664	\$11,738,453	\$11,595,167	\$9,731,554	\$7,679,755	\$7,778,670	\$9,499,349	\$11,319,349	\$10,723,195	\$117,081,564
3	Difference [1]-[2]	-\$1,659,150	-\$16,310	\$1,652,338	\$1,063,320	\$541,933	\$3,230,505	-\$902,525	\$1,604,954	\$1,285,685	\$1,820,589	\$6,641,040	\$3,287,089	\$18,549,467
4	Percent Difference [3]/[2]	-16.32%	-0.20%	18.57%	10.78%	4.62%	27.86%	-9.27%	20.90%	16.53%	19.17%	58.67%	30.65%	15.84%

Office of Regulatory Staff
History of Cumulative Recovery Accounts
Duke Energy Progress, LLC
Docket No. 2022-1-E

REVISED EXHIBIT BSB

Period Ending	Base Fuel Costs (Over)/Under	Environmental Costs (Over)/Under	Capacity Costs (Over)/Under	DERP Avoided Costs (Over)/Under
February-12	\$ (5,129,003)	\$ 367,391	N/A	N/A
February-13	\$ (695,511)	\$ 318,611	N/A	N/A
February-14	\$ 21,559,994	\$ 558,851	N/A	N/A
February-15	\$ 20,760,123	\$ 60,632	\$ 1,799,759	N/A
February-16	\$ 6,564,246	\$ 364,914	\$ 1,907,835	N/A
February-17	\$ 6,872,181	\$ 618,034	\$ 893,261	\$ -
February-18	\$ 23,394,223	\$ (616,503)	\$ 1,622,069	\$ 2,715
February-19	\$ 13,424,397	\$ 199,209	\$ 574,928	\$ 19,286
February-20	\$ 8,184,897	\$ (86,729)	\$ 2,280,575	\$ 12,640
February-21	\$ 10,891,999	\$ (348,872)	\$ 5,044,755	\$ (19,308)
February-22	\$ 36,766,807	\$ 415,184	\$ 6,053,780	\$ (59,164)

Office of Regulatory Staff
Proposed Fuel Factors
Duke Energy Progress, LLC
Docket No. 2022-1-E

REVISED EXHIBIT BSB-

Proposed Proposed Fuel Factors (¢/kWh)					
Customer Class	Base Fuel Component	Environmental Component	Capacity Related Component	DERP Avoided Cost Component	Total Fuel Factor
Residential ¹	2.808	0.037	0.522	0.003	3.370
General Service (non-demand)	2.788	0.044	0.588	0.004	3.424
General Service (demand)	2.788	- ²	- ³	- ⁴	2.788
Lighting	2.788	0.000	0.000	0.000	2.788

¹ The Residential Base Fuel Factor includes the Residential Energy Conservation Discount, Rider RECD-2C, adjustment factor of 0.7068%.

² The Proposed General Service (demand) Environmental Component is 10 cents per kW.

³ The Proposed General Service (demand) Capacity Related Component is 136 cents per kW.

⁴ The Proposed General Service (demand) DERP Avoided Cost Component is 0 cents per kW.